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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHEW, JOHN

ART UNIT PAPER NUMBER

2664

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,848

Applicant(s)

ALSPAUGH ET AL.

Examiner

John L Shew

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27, 33-36 and 38-41 is/are rejected.
- 7) ☒ Claim(s) 28-32 and 37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date g. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
2. Page 26 line 22 cites "R-DSLAMs 8₃-1 and 8₃-2 connect to the ATM switch 30-3 via the transports 135₃-1 and 135₃-2", FIG. 4 does not show the recited items.
3. Page 26 line 25 cites "8₃-1", FIG. 4 does not show this item.
4. Page 26 line 26 cites "8₃-2", FIG. 4 does not show this item.
5. Page 26 line 28 cites "84₄-1" should be "8₄-1".
6. Page 11 line 23 cites "FIG." should be "FIG. 5".
7. Page 13 line 7 cites "networks 8" should be "networks 14".
8. Page 15 line 28 cites "port unit 52" should be "port unit 35".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-14, 18, 22-26 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elwahab et al. in view of Ayanoglu et al.

Claims 1, 5, 18, 22, Elwahab teaches a communications system (page 1, column 1 lines 21-25) referenced by the management of telecommunications devices, for communicating between points of presence and customer premises (FIG. 1) referenced by ISP 48 for points of presence and customer premises 14, comprising a plurality of ATM nodes (FIG. 1) referenced by ATM Switches 40 connected by transports within an ATM network 42, first connection means for connecting said ATM nodes to said customer premises (FIG. 1) referenced by DSL 18 connection to customer premises 14, second connection means for connecting said ATM nodes to said points of presence (FIG. 1) referenced by connection between ATM Switch 40 and ISP 48, a plurality of transports connecting said ATM nodes in an ATM (FIG. 1) referenced by the ATM Switches 40 connected within the ATM Network 42. Elwahab teaches a control means for controlling the routing of data said ATM nodes to enable the transport of information between said points of presence and customer premises (FIG. 1, page 2 column 1 lines 51-56) referenced by the ATM Switches 40 which includes routing functions to forward messages to the correct location of information between the ISP 48 points of presence and the Customer Premises 14.

Elwahab does not expressly disclose an ATM mesh network nor a wireless network.

Ayanoglu et al teaches an ATM mesh network (FIG. 6) referenced by the mesh network of portable ATM base stations. Ayanoglu teaches an ATM network wherein transports

are wireless (FIG. 3, column 3 lines 35-44, FIG. 4, column 4 lines 8-26) referenced by wireless transports between ATM Portable Base Stations 22. Ayanoglu teaches said first connection means are wireless (FIG. 3) referenced by ATM Portable Base Station 22 connecting to Wireless Laptops 28 which are part of customer premise equipment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless mesh transports for ATM switches as taught by Ayanoglu into the telecommunications management system of Elwahab for the purpose of portability of mobile laptop computers.

Claims 6, 23, Elwahab teaches first connection means for connecting said ATM nodes to said customer premises (FIG. 1) referenced by DSL 18 connection to customer premises 14. Elwahab does not teach a wireless ATM network.

Ayanoglu teaches an ATM network wherein transports are wireless (FIG. 3, column 3 lines 35-44, FIG. 4, column 4 lines 8-26) referenced by wireless transports between ATM Portable Base Stations 22. Ayanoglu teaches said first connection means are wireless (FIG. 3) referenced by ATM Portable Base Station 22 connecting to Wireless Laptops 28 which are part of customer premise equipment.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless mesh transports for ATM switches as taught by Ayanoglu into the telecommunications management system of Elwahab for the purpose of portability of mobile laptop computers.

Claims 7, 24, Elwahab teaches the use of multiplexers in association with an ATM switch (FIG. 1, page 2 column 2 lines 5-12) referenced by Digital Subscriber Line Access Multiplexer 36 and ATM Switch 40 which is part of the ATM node.

Claims 8, 25, Elwahab teaches ATM nodes are switches (FIG. 1) referenced by ATM Switch 40.

Claims 9, 26, Elwahab teaches an ATM network with DSLAMs to access customer premises'. Elwahab does not teach routing based upon quality determination. Ayanoglu teaches said control means operates to determine the quality of communications over said transports and establishes ATM routing based upon said quality (FIG. 6, FIG. 7, FIG. 9, column 8 lines 36-67, column 9 lines 1-12) referenced by the Portable Base Station using QoS levels and routing tables in determination of paths. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless mesh transports for ATM switches as taught by Ayanoglu into the telecommunications management system of Elwahab for the purpose of portability of mobile laptop computers.

Claims 10, 33, Elwahab teaches said ATM nodes are supervised by an element manager (FIG. 1, page 2 column 1 lines 10-29, column 2 lines 20-23) referenced by the Element Management System tool 12 managing network elements including ATM Switches.

Claims 11-14, Elwahab teaches said ATM network connects to an ILEC central office (page 2 column 2 lines 38-49) referenced by a Incumbent Local Exchange Carrier as a network provider connecting the ATM network as an ISP. Elwahab teaches said ATM network connects to a CLEC office (page 2 column 2 lines 38-49) referenced by a Competitive Local Exchange Carrier as a network provider connecting the ATM network as an ISP. Elwahab teaches said ATM network connects to other networks (FIG. 1) referenced by the Internet network 60. Elwahab teaches said other networks include the Internet (FIG. 1) referenced by the Internet 60.

10. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elwahab et al. as applied to claims 1, 5-14, 18, 22-26, 33 above, in view of Ayanolglu et al.

Elwahab teaches a communications system operating for servicing said customer premises (FIG. 1, page 2 column 1 lines 8-14) referenced by the Element Management System tool 12 managing smart devices within a customer premise, where said customer premises are connected to access points (FIG. 1) referenced by access point of DSL 18 connection, and use an established backhaul transport to an office (FIG. 1) referenced by the established Central Office ATM Network 42, wherein said first connection means includes one or more remote digital subscriber line access multiplexers (FIG. 1) referenced by Digital Subscriber Line Access Multiplexer 36 being located remotely from the ATM Switch, access connecting means for connecting said

access multiplexers to said access points (FIG. 1) referenced by the physical connection line between DSLAM and the ATM Switch 40, and wherein said backhaul transport for connecting said access multiplexers to provide broadband services to said customer premises (FIG. 1) referenced by the broadband services to PC 22, Phones 30, TV 26 and Smart Appliances 32 at the Customer Premises 14. Elwahab teaches ILEC and CLEC offices incorporated to the ATM network and other networks (FIG. 1, page 2 column 2 lines 36-43) referenced by the ILEC/CLEC network providers responsible for connectivity which includes other networks such as the Internet 60. The ILEC/CLEC can be part of any Central Office of the ATM network.

Elwahab only teaches an established transport, does not teach an alternate backhaul transport. Ayanoglu teaches an alternate backhaul transport (FIG. 2, FIG. 3, column 3 lines 46-52) referenced by the wireless ATM network which works in conjunction with an existing ATM Wide Area Network 18 to form a backbone network.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless mesh transports for ATM switches as taught by Ayanoglu into the telecommunications management system of Elwahab for the purpose of portability of mobile laptop computers.

11. Claims 2-4, 16 and 19-21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Elwahab and Ayanoglu as applied to claims 1-14, 18, 22-26, 33 above, and further in view of Hall.

Claims 2-4, 16 and 19-21, Elwahab and Ayanoglu teaches a wireless telecommunications management system. Elwahab and Ayanoglu do not teach ATM nodes are environmentally-hardened. Hall teaches a environmentally-hardened (weather resistant) communications platform (FIG. 11, column 19 lines 65 – column 20 line 10) installed on a utility-pole.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to install the wireless communications platform of ATM switches as taught by Elwahab and Ayanoglu into the environmental modular computing platforms of Hall for the purpose of integration of new technology to avoid hyper-obsolescence.

12. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elwahab and Ayanoglu as applied to claims 1, 5-14, 18, 22-26, 33 and 15, 17 above, and further in view of Snelgrove.

Claim 27, Elwahab and Ayanoglu teach a wireless ATM management network. Elwahab and Ayanoglu does not teach not teach quality of communications base on bit error rate. Snelgrove teaches quality of communications based on bit error rate measurements (page 1 column 1 lines 26-34, page 4 column 2 lines 51-61, page 5 column 2 lines 49-52, page 6 column 1 lines 8-14) referenced by the measurement of a BER parameter for a type of Quality of Service.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a QoS BER parameter as taught by Snelgrove to the network

of wireless ATM switches and DSLAMs as taught by Elwahab and Ayanoglu for the purpose of managing communications over a telecommunications network.

13. Claims 34-36 and 41, are rejected under 35 U.S.C. 103(a) as being unpatentable over Elwahab in view of Ayanoglu, and further in view of Hall.

Claims 34-36 and 41, Elwab teaches a communications system for servicing customers premises (FIG. 1, page 2 column 1 lines 8-14) referenced by the Element Management System tool 12 managing smart devices within a customer premise, connected to access points (FIG. 1) referenced by access point of DSL 18 connection, and connected over an established backhaul transport to an office (FIG. 1) referenced by the established Central Office ATM Network 42, comprising an access network formed of one or more digital subscriber line access multiplexers (FIG. 1) referenced by DSLAM 36 with network DSL connections to many customer premises, access connecting means for connecting said access multiplexers to said access points (FIG. 1) referenced by DSLAM 36 connecting to DSL 18, forming a backhaul transport for connecting access multiplexers to provide broadband services (FIG. 1, page 6 column 1 lines 16-23) referenced by backhaul ATM network 42 connecting to DSLAMs providing broadband services including Ethernet 24, Telephony 62, Cable 28 and Power Lines 34. Elwahab teaches ILEC and CLEC offices (FIG. 1, page 2 column 2 lines 36-43) referenced by ILEC/CLEC network providers which are connected to the ATM network 42 in the same way the Central Office is connected thus the CO is also a ILEC/CLEC.

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Elwahab does not teach a wireless transport network nor environmentally-hardened enclosures.

Ayanoglu teaches a plurality of access wireless transports (FIG. 3, column 3 lines 36-44) referenced by Wireless ATM Network 20 with wireless transports 24, a mesh network forming an alternate backhaul transport (FIG. 6) referenced by the wireless ATM mesh network, having redundant connections (FIG. 6) referenced by multiple paths between Z and Y, a plurality of inter-network wireless transports connecting said access network to said mesh network (FIG. 3) referenced by inter-networks WAN and PSTN connecting to wireless mesh network 20. Ayanoglu teaches said control means operates to determine the quality of communications over said transports and establishes ATM routing based upon said quality (FIG. 6, FIG. 7, FIG. 9, column 8 lines 36-67, column 9 lines 1-12) referenced by the wireless Portable Base Station using QoS levels and routing tables in determination of paths. The wireless ATM network form a plurality of alternate second transports.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless ATM transport network as taught by Ayanoglu to Elwahab's ATM broadband network inclusive of DSLAMs for the purpose of mobile laptop access.

Hall teaches an all-weather environmentally-hardened pole-mountable enclosure (FIG. 11, column 19 lines 65 – column 20 line 10) referenced by the weather-resistant outdoor enclosure mounted on a utility pole for communications services. Hall teaches a

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platform which is modular and can be deployed for various purposes (column 1 lines 5-12) referenced by use of modules equipped for a variety of missions.

It would have been further obvious to one of ordinary skill in the art at the time the invention was made to install the wireless communications network of ATM switches as taught by Elwahab and Ayanoglu into the environmental modular communications platforms of Hall for the purpose of integration of new technology to avoid hyper-obsolescence.

14. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elwahab, Ayanoglu and Hall as applied to claims 34-36, 41 above and further in view of Chiu.

Claims 38-39, Elwahab, Ayanoglu and Hall disclose a wireless ATM communications network incorporating utility pole environmental enclosures. They do not disclose subcomponents of DSLAMS. Chiu teaches access multiplexers include a processor unit (FIG. 1, FIG. 7) referenced by DSLAM (IMAS) 101 using a PowerPC MPC603 200, an ATM assembler and disassembler unit (FIG.7) referenced by ATM Segmentation And Reassembler 208, and an ATM switch fabric (FIG. 16) referenced by Chassis Switch Card of the IMAS. Chiu teaches access multiplexers includes a master unit and one or more trunk interface units (FIG. 5) referenced by Chassis Switch Card 10 interface to ATM network and Line Card 1 interface to DSL ports.

Claim 40, Hall teaches an environmentally-hardened (weather-resistant) communications platform enclosure (FIG. 11, column 19 line 65 – column 20 line 10) installed on an outdoor utility-pole. The use of the enclosure is applicable to various modules including DSLAMs CPU master subsystem and trunk interfaces.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the DSLAM components disclosed by Chiu to the DSLAMs of the ATM network of Elwahab for support of next generation virtual connections.

Allowable Subject Matter

15. Claims 28-32 and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L Shew whose telephone number is 703-305-8708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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